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10/659,612	09/09/2003	Henry William Gornick	GP-301238	1831

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EXAMINER

LAI, ANNE VIET NGA

ART UNIT PAPER NUMBER

2636

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/659,612

Applicant(s) <sup>dk</sup>

GORNICK, HENRY WILLIAM

Examiner

Anne V. Lai

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

1. Claim 22 is objected to because of the following informalities:

In claim 22, the phrase "the method comprising the steps of" after the phrase "a first module configured to detect a filter change in an engine" appears to be an error typing. Appropriate correction or clarification is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hasfjord** [US. 6,172,602] in view of **Langervik** [US. 6,484,127] and further in view of **Kimata et al** [US. 6,614,345].

Regarding claim 1, **Hasfjord** (figs. 1-5; col. 5, lines 18-32; col. 8, lines 56-65) discloses a method for detecting a filter change in an engine comprising: monitoring a fluid pressure in the engine following the startup of the engine; if this pressure exceeds a pre-determined threshold, activate a fluid life monitoring system (maintenance alert system, display); and resetting the fluid life monitoring system after the filter change service has been performed.

**Hasfjord** does not disclosed in detail how to monitor the change in fluid pressure; **Langervik** (abstract; figs. 2-3; claim 1) teaches a method of detecting when an engine oil filter has been changed comprising: monitoring a fluid pressure in the engine following the startup of the engine, and the change in the fluid pressure related to the state of an oil filter is monitored by detecting a change in an amount of time required for the fluid pressure to reach a pre-determined level; **Langervik** also teaches another method for determining the change in fluid pressure related to the state of an oil filter (claim 8); It would have been obvious to one having ordinary skill in the art at the time of the invention was made the determination of the change in fluid pressure can be performed by any method of choice based on designer preference and convenient of material supply or cost. **Hasfjord** discloses manually resetting of the fluid life monitoring system (col. 8, lines 56-65); **Kimata et al** suggest automatic resetting of a fluid pressure monitoring system (oil pressure warning system; abstract; col. 6, lines 37-42; col. 9, lines 51-57; col. 10, lines 16-24). It would have been obvious, the automatic resetting can be additional choice for the convenient of the user do not have to push the reset button switch at each filter change service.

Regarding claim 2, **Kimata et al** suggest resetting of the fluid life monitoring comprising setting a flag in a memory location (col. 10, lines 16-24).

Regarding claim 3, **Langervik** teaches performing additional data processing after detecting the change in the amount of time required for the fluid pressure to reach a pre-determined level (fig. 2, log data, retrieve data for service management).

Regarding claims 4, and 7-9, **Langervik** (fig. 2; claims 6 and 7) teaches the storing of data elements including odometer reading and date related to the change in the amount of time required for the fluid pressure to reach a pre-determined level.

Regarding claims 5 and 6, **Langervik** teaches the step of comparing an actual length of time required for the fluid pressure to reach a pre-determined level with an expected length of time (fig. 2; claim 1), and the expected length of time is determined by averaging a plurality of actual length of times required for the fluid pressure to reach the pre-determined level ( $T_N$ , fig. 3).

Regarding claim 10, **Hasfjord** discloses resetting the fluid life monitoring system when the pressure exceeds a pre-determined threshold (col. 5, lines 17-32) and **Langervik** (fig. 3) teaches determine the pressure exceeds a pre-determined threshold  $P$  by detecting the amount of time exceeds a threshold period of time  $T_N$ . Therefore, it would have been obvious to one having ordinary skill in the art the combination of **Hasfjord** and **Langervik** method can reset the fluid life monitoring system if the amount of time exceeds a threshold period of time.

Regarding claims 11-17, **Hasfjord**, **Langervik** and **Kimata et al** combined disclose a fluid monitoring system for an engine containing a lubricating fluid, the fluid monitoring system comprising:

a pressure monitor (34, Langervil, fig. 1-2) coupled to the engine 12 configured to provide an indication of a fluid pressure;

an engine control module (Langervil, fig. 2) configured to receive the indication of the fluid pressure 34, to monitor changes in the fluid pressure over a time period

following startup of the engine, to detect a change in an amount of time for the fluid to reach a pre-determined fluid pressure, and to reset (Hasfjord, figs. 1-5; Kimata et al, col. 6, lines 37-42) the fluid monitoring system in response to the change in fluid pressure (i.e., the change in the amount of time, Langervik); the engine control module sets a flag in a memory location after detecting the change (Kimata);

a vehicle data module (Langervik, fig. 3, collect other relevant data) coupled to the engine control module to supply data elements to the engine control module;

an interface (10, Langervik, fig. 1) coupled to the engine control module to provide a signal indicating the need for replacing the lubricating fluid;

the engine control module comprises a memory to store data elements associated with replacing lubricating fluid (log data, Langervik, fig. 2).

Regarding claims 18-21, **Hasfjord, Langervik and Kimata et al** combined disclose a method of resetting a fluid life monitoring system in an engine comprising the steps of:

monitoring a fluid pressure following startup of the engine;

evaluating the actual length of time required for the fluid pressure to reach a pre-determined level (langervik, figs. 2-3);

comparing the actual length of time to an expected length of time;

setting a flag in a first memory location, based on a detected difference, thereby resetting a fluid life monitoring system (Kimata et al; col. 10, lines 16-24); and

storing at least one data element (odometer reading or date) related to the difference between the actual length of time and the expected length of time in a second memory location (Langervik, fig. 2);

providing a fluid change history report (Langervik, fig. 2, data retrieval for service management).

Regarding claims 22, **Hasfjord, Langervik and Kimata et al** combined disclose a digital storage medium having computer-executable instructions stored thereon, comprising:

a first module configured to detect a filter change in an engine (langervik; fig. 2, filter change recognized);

a second module configured to monitor a fluid pressure in the engine following startup of the engine (langervik, fig. 2, oil pressure monitor);

a third module configured to detect a change in an amount of time required for the fluid pressure to reach a pre-determined level (Langervik, fig. 2, measure time to reach P); and

a fourth module configured to reset a fluid life monitoring system based on the change in the amount of time for the fluid pressure to reach a pre-determined level (combined Kimata et al, reset, col. 10, lines 16-24; Hasfjord, reset, col. 56-65; Langervik, change in amount of time, fig. 2).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Jacoby et al** disclose a filter monitoring system. [US. 4,500,874]

**Linares et al** disclose a system for replacing engine lubricant. [US. 5,092,429]

**Post et al** discloses an engine oil change indicator system. [US. 6,208,245]

**Bondarowicz et al** disclose a method of monitoring engine lubricant condition.  
[US. 6,513,368]

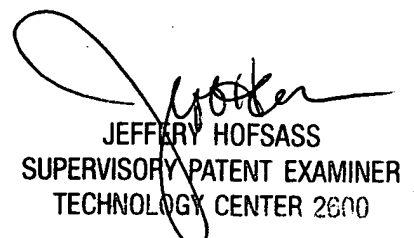
**Lilly et al** disclose an automatic switching duplex filter head and diesel fuel conditioning system. [US. 6,474,289]

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne V. Lai whose telephone number is 571-272-2974. The examiner can normally be reached on 8:00 am to 5:30 pm, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass Jeffery can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. V. Lai  
December 22, 2004

  
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